CLAIMS:

1. A retroviral packaging cell line transformed with a viral vector comprising nucleic acid encoding a polypeptide for treating a disease or disorder, the retroviral packaging cell line being capable of expressing nucleic acid encoding a growth factor so that the growth factor is (i) displayed on the cell surface or (ii) expressed as a fusion with a viral envelope protein so that the growth factor is displayed on the surface of viral particles,

wherein the cell line packages the nucleic acid encoding the polypeptide in viral particles produced by the retroviral packaging cell line, the cell line being for use in a method of medical treatment of a disease or disorder that responds to the polypeptide.

2. The retroviral packaging cell line of claim 1 wherein the medical treatment is transfer of the nucleic acid encoding the polypeptide to a population of quiescent cells which are induced to divide by the surface bound growth factor, so that the nucleic acid is incorporated into the genome of the quiescent cells.

3. The retroviral packaging cell line of claim 1 or claim 2 wherein the cells are haematopoeitic stem cells.

4. The retroviral packaging cell line of any one of claims 1 to 3 wherein growth factor is stem cell factor or FLT3 ligand.

5. The retroviral packaging cell line of claim 4 wherein growth factor is stem cell factor.

6. The retroviral packaging cell line of any one of the preceding claims further expressing nucleic acid encoding a receptor to target the cells to the bone marrow and/or an immunosuppressive factor so that the receptor and/or

immunosuppressive factor are displayed on the cell surface.

7. Retroviral particles displaying a surface bound growth factor as a fusion with an envelope protein, the particles being produced by the retroviral packaging cell line of any one of the preceding claims.

8. The retroviral particle of claim 7 wherein the growth factor is SCF or FLT3-ligand.

9. The retroviral particles of claim 7 or claim 8 wherein the growth factor is attached to the N-terminus of a retroviral envelope protein.

10. The retroviral particle of any one of claims 7 to 9 wherein envelope protein is viral envelope SU protein.

11. The retroviral particle of any one of claims 7 to 10 wherein the growth factor is fused to the envelope protein via a cleavable linker.

12. The retroviral particles of any one of claims 7 to 11 wherein the particle displays multiple growth factors.

13. A composition comprising a retroviral packaging cell line or retroviral particles of any one of claims 1 to 12, in combination with a suitable carrier.

14. A retroviral packaging cell line expressing nucleic acid encoding a growth factor as a fusion with an envelope glycoprotein so that the growth factor is displayed on the surface of the cell line.

15. The retroviral packaging cell line of claim 14 wherein the growth factor is FLT3-ligand.

16. The retroviral packaging cell line of claim 14 or

claim 15 wherein the cell line is a lentiviral packaging cell line.

17. The use of a retroviral cell line or retroviral particles of any one of claims 1 to 12 in the preparation of a medicament for treating a disease or disorder that responds to the polypeptide encoded by the nucleic acid packaged in the retroviral particles.

18. The use of claim 17 wherein the medicament comprising the retroviral packaging cell line or retroviral particles is administered by implantation into a patient's bone marrow or by infusion into a patient's blood.

19. The use of claim 18 wherein the retroviral packaging cell line expresses a receptor to target the cells to the bone marrow and/or an immunosuppressive factor on their surface.

20. A method of transforming a population of quiescent cells with nucleic acid encoding a polypeptide so that the nucleic acid is incorporated into the genome of the cells, the method comprising exposing the cells to a retroviral packaging cell line or retroviral particles of any one of claim 1 to 12, wherein the surface bound growth factor induces the cells to divide, so that the nucleic acid encoding the polypetide for treating a disease or disorder contained in the viral particles can incorporate into the genome of the cells.

21. The method of claim 20 wherein the quiescent cells are a population of bone marrow cells enriched in haematopoeitic stem cells.

22. A population of cells produced by the method of claim 20 or claim 21 having the nucleic acid encoding a polypeptide for treating a disease or disorder stably

incorporated into their genome.

23. A pharmaceutical composition comprising the cells of claim 22.

24. A method for introducing nucleic acid encoding a polypeptide for treating a disease or disorder into the genome of a population of cells *in vivo*, the method comprising adminstering a retroviral packaging cell line or retroviral particles of any one of claims 1 to 12 by implantation into a patient's bone marrow or by infusion into a patient's blood.